Journal of Advanced Research in Dynamical and Control Systems, 2018, vol.10, N13 Special Issue, pages 558-563

Justification of the level of investment support of application of gas-motor fuels at urban passenger public transport

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Abstract

© 2018, Institute of Advanced Scientific Research, Inc.. All rights reserved. -The article is devoted to solving one of the urgent problems of urban public transport, justifying the level of investment support for activities aimed at improving the quality of transport services for the population. At the same time, details of the implementation of such an event, such as the change in the structure of the park, the justified application of low-floor city buses operating on gas engine fuel, are considered in detail. The article describes a math model that allows to determine the technological parameters of operation on the route of vehicles of different passenger capacity and to perform an assessment of the economic indicators of measures to change the structure of the park. The developed model is practically tested in practice on one of the city routes of the city of Orenburg. Based on the results of practical application, the three-dimensional dependence of annual operating costs on passenger capacity and the cost of vehicles operating on compressed natural gas has been determined. As an example, the minimum level of investment support for the implementation of low-floor city buses of large capacity operating on compressed natural gas on the route is identified. The obtained results testify to the effectiveness of the application of the developed mathematical model as a tool for determining the parameters for implementing measures aimed at improving the quality of transport services for the population..

Keywords

City passenger transportation, Gas motor fuel, Road transport, Urban public transport

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